

**Abstract of the Invention**

A system is provided for sensing a motor current from a three phase inverter. A first resistor is coupled between a first transistor of the inverter and a supply voltage, and a second resistor is coupled between a second transistor of the inverter and ground. Circuitry coupled to the first and second resistors generates an upper and lower current. When the first transistor is active, the upper current is proportional to the sum of a reference voltage and a voltage across the first resistor, and the lower current is proportional to the reference voltage. When the second transistor is active, the upper current is proportional to the reference voltage, and the lower current is proportional to the sum of the reference voltage and a voltage across the second resistor. Based on the difference of the lower and upper currents, the circuitry provides an output current proportional to the motor current.